

APPENDIX D

Parking Study

**Borregas Avenue Bicycle Bridges
Parking Study
January 6, 2006**

The Borregas Avenue Bicycle Bridges project will require the removal of some on-street parking on Persian Drive, Weddell Drive and Ahwanee Avenue. This parking study was conducted to determine the existing demand for the on-street parking and to identify whether there is adequate parking supply in the vicinity to accommodate the existing demand after the parking is removed.

Methodology

The parking study measured weekday and weekend parking volumes for morning (between 7am and 9am), mid day (between 1pm and 3pm) and evening (after 6pm). The supply and demand for both on-street parking spaces and off-street parking spaces were counted. For each section of on-street parking that is proposed to be eliminated, peak parking demand was identified. The study then determined whether there was adequate off-street parking available on the properties adjacent to the parking removal. The City's zoning code requires that all land uses provide adequate parking on-site. Street parking may not be counted towards parking for a particular site. The nature of the on-street parking demand in the area is virtually exclusively to serve adjacent land uses, as there are no major parking generators or parking capacity issues in the greater neighborhood are of the project. If this was not the case, then a broader study was conducted to identify any potential issues that may arise from the overflow parking and determine possible measures to minimize any problems.

Persian Drive

Parking is proposed to be eliminated on Persian Drive from Plaza Drive to Borregas Avenue. There are a total of six (6) on-street parking spaces that will be eliminated adjacent to 102 Persian Drive. The peak demand for this section is four (4) parking spaces during the weekday after 6pm. During this time, as shown in Table 1, there are 11 parking spaces available in the parking lot for 102 Persian Drive. There are also many parking spaces available in the parking lot for the retail site directly next to 102 Persian Drive.

Table 1 - Persian Drive

Total # of On-Street Parking Spaces	Peak On-Street Parking Demand (weekday after 6pm)	Off-Street Supply free during Peak Demand
6	4	11

Based on this data, it is not anticipated that any issues will arise due to the elimination of 6 parking spaces on Persian Drive. The available off-street supply will meet the on-street demand.

Weddell Drive

Parking is proposed to be eliminated on Weddell Drive from approximately 150 feet west of Borregas Ave to approximately 150 feet east of Weddell Court. This is adjacent to the following properties: 101 W. Weddell Drive, 211 W. Weddell Drive, 907 Weddell Court, and 904 Weddell Court. A total of 16 spaces are proposed to be eliminated.

West of Borregas Avenue – A total of four (4) spaces are proposed to be removed. The peak demand for this section is four (4) parking spaces during the weekend morning. Peak demand for the off-street parking lot of 101 W. Weddell Drive was during the weekend after 6pm. During this time there were 15 unused parking spaces. To be conservative, that number was used instead of the peak demand for the weekend morning, 22 unused parking spaces.

Table 2 - Weddell Drive West of Borregas

Total # of On-Street Parking Spaces	Peak On-Street Parking Demand (weekend AM)	Off-Street Supply free during Peak Demand
4	4	15

East of Borregas Avenue – A total of 12 spaces are proposed to be removed east of Borregas Avenue. The peak demand for this section is four (4) parking spaces during the weekday afternoon. During this time, as shown in Table 3, there are 19 off-street spaces available for the businesses adjacent to the parking removal.

Table 3 - Weddell Drive East of Borregas

Total # of On-Street Parking Spaces	Peak On-Street Parking Demand (weekday Mid)	Off-Street Supply free during Peak Demand
12	4	19

Based on this data, it is not anticipated that any issues will arise due to the elimination of 16 parking spaces on Weddell Drive. The available off-street supply will meet the on-street demand.

Ahwanee Avenue

Parking is proposed to be eliminated on Ahwanee Avenue from Borregas Avenue to Alturas Avenue. There are a total of 23 on-street spaces all adjacent to the property of 874 Borregas Avenue, The Sands Studio Apartments. The peak demand for this section is 17 vehicles during the weekend morning. It is observed that the majority of those using these spaces are residents of The Sands Studio Apartments. Table 4 shows that there are 18 unused parking spaces in the off-street parking lot for the adjacent property during the peak use. However, these parking spaces are numbered and allotted to each unit so it is possible that some of the on street demand will not be able to be absorbed by the off-street spaces.

Table 4 - Ahwanee Avenue between Borregas Ave and Alturas Ave

Total # of On-Street Parking Spaces	Peak On-Street Parking Demand (weekend AM)	Off-Street Supply free during Peak Demand
23	17	18

An expanded parking study was conducted for the neighborhood south of Ahwanee Avenue in order to determine what effect the parking removal will have on the neighborhood as a whole. On and off street parking supply and demand were measured for the following streets:

- Alturas Avenue from Borregas Ave to Ahwanee Avenue,
- Borregas Avenue from Ahwanee Ave to Del Norte Ave,
- Hemlock Avenue from Borregas Ave to San Diego Ave.

The predominant land use for the neighborhood south of Ahwanee consists of single family homes. Off-street supply was counted by measuring the number of driveway spaces available. To be conservative, garage spaces were not used as part of the off-street supply.

Because of its proximity to Ahwanee Ave, Alturas Avenue and Borregas Avenue would be most likely to absorb the vehicles that were previously parked on Ahwanee. As table 5 demonstrates, the on-street parking on Alturas is already heavily utilized. On-street parking demand for Borregas Ave is also high, but free spaces are available. It is likely that the available supply on Borregas Avenue will absorb any shift in demand from removal of parking on Ahwanee Avenue.

The community has also expressed concerns regarding lack of available on-street parking on Alturas under current conditions. To remedy this situation, the project will propose to implement a residential parking permit program. It was also observed that there were some parking inefficiencies. For example, in a length of roadway that has the capacity to fit 3 cars, 2 cars would park in such a way that the 3rd car wouldn't be able to fit. This means that even though technically there are seven (7) free on-street parking spaces in the peak hour, effectively there are fewer available. One possible solution to this could be to mark the on street spaces.

Table 5

	Total # of On-Street Parking Spaces	Peak On-Street Parking Demand	On-Street Supply free during Peak	Off-Street Supply free during Peak (driveway only)
Alturas Ave	56	49	7	19
Borregas Ave	50	19	31	12
Hemlock Ave	23	6	17	17

It is anticipated that the 17 vehicles that currently park on Ahwanee Ave will be dispersed first where possible in the parking lot of 874 Borregas Ave. Assuming a permit parking program is implemented on Alturas, remaining vehicles will then park on Borregas Ave, and on Hemlock Ave. This study shows that there is currently adequate on-street parking supply to absorb that demand.

Appendix A

1. On-Street Parking Survey
2. Off-Street Parking Survey

On-Street Survey

Location	Supply		Demand					
	Effective parking Distance	# of Spaces (24 hr)	Day 1 Weekday			Day 2 Weekend		
			7-9am	1-3 pm	After 6 pm	7-9am	1-3 pm	After 6 pm
South of 101								
Ahwanee Ave.								
126 Ahwanee to Borregas		8	6	6	8	9	9	9
Borregas to Alturas	582	23	10	10	11	10	10	7
North of 101								
Weddell Dr	101	4	3	2	0	4	3	3
Borregas to Weddell Ct	189	8	1	1	0	2	0	0
Weddell Ct to 233 Weddell	103	4	2	2	0	0	0	0
South of 237								
Persian Dr.		6	0	3	4	0		2
Borregas to Morse		No parking						
North of 237		No Pkg to be removed						

Off-Street Survey

	Supply			Demand					
				Day 1 weekday			Day 2 weekend		
Location	Garage Spaces	D'Way	Parking lot Spaces	7-9am	1-3 pm	After 6 pm	7-9am	1-3 pm	After 6 pm
South of 101									
Ahwanee Ave.			98	46	36	64	73	58	54
874 Borregas			69	36	24	31	46	36	35
North of 101									
Weddell Dr			84	49	46	60	62	67	69
211 W. Weddell			26	17	14	4	2	2	2
907/909 Weddell Ct			20	10	11	9	1	1	1
904 Weddell Ct			22	16	23	4	4	5	4
South of 237									
Persian Dr.			87	6	38	55	9	27	40
102 Persian Drive			25	3	8	14	8	1	1
North of 237	No Parking to be removed								

Appendix B

Expanded Parking Study for Neighborhood South of Highway 101

- 1. On-Street Parking Survey**
- 2. Off-Street Parking Survey**

Expanded Study
ON-STREET

Location	From	To	Supply Total # of spaces	Demand											
				Day 1 (Tuesday)			Day 2 (Wed)			Day 3 (Friday)			Day 4 (Saturday)		
				AM	Mid day	PM	AM	Mid day	PM	AM	Mid day	PM	AM	Mid day	PM
Ahwanee	Borregas	Alturas	23	10	10	11	8	7	7	15	8	6	13	17	10
Borregas west side	Ahwanee	Del Norte	30	10	4	4	5	7	7	8	10	8	8	7	7
Borregas east side	Del Norte	Ahwanee	26	7	5	8	9	4	4	11	7	3	10	9	9
Borregas Total			50	17	15	19	13	11	11	19	17	11	18	18	16
Alturas south side	Borregas	Ahwanee	27	19	19	22	22	18	18	25	18	15	23	19	18
Alturas north side	Ahwanee	Borregas	29	18	22	21	16	14	14	24	15	16	24	21	21
Alturas Total			56	37	41	43	38	32	32	49	33	31	47	40	39
Hemlock south side	Borregas	end	3	2	1	1	1	1	1	2	2	0	2	1	1
Hemlock north side	end	Borregas	13	1	3	3	2	4	4	1	1	1	0	1	1
Hemlock total			23	3	4	4	3	5	5	3	3	1	2	2	2

Expanded Study
OFF-STREET

Location	From	To	Supply Total # of Driveway Spaces	Supply # of Garage Spaces	Demand											
					Day 1 (Tuesday)			Day 2 (Wed)			Day 3 (Friday)			Day 4 (Saturday)		
					AM	Mid day	PM	AM	Mid day	PM	AM	Mid day	PM	AM	Mid day	PM
Borregas west side	Ahwanee	Del Norte	21	13	15	12	19	17	11	16	15	11	13	19	13	13
Borregas east side	Del Norte	Ahwanee	21	15	8	6	11	10	6	12	10	7	10	9	6	10
Borregas Total			42	28	23	18	30	27	17	28	25	18	23	28	19	23
Alturas south side	Borregas	Ahwanee	29	28	13	6	13	14	5	18	17	9	15	16	12	15
Alturas north side	Ahwanee	Borregas	22	22	9	6	10	6	9	14	9	8	14	12	10	12
Alturas Total			51	50	22	12	23	20	14	32	26	17	29	28	22	27
Hemlock south side	Borregas	end	19	16	7	5	6	8	3	9	14	4	8	6	8	8
Hemlock north side	end	Borregas	22	15	13	10	12	15	8	9	7	11	13	15	12	12
Hemlock Total			41	31	20	15	18	23	11	18	21	15	26	21	20	20
Columbia Pkg lot			13		0	1	12	0	2	1	2	6	0	16	4	8
Grocery Pkg lot			12		9	15	16	10	20	3	7	7	0	11	28	9
The Sands			39		36	24	37	26		46	40	29	44	51	38	37